American Farmer,

AND SPIRIT OF THE AGRICULTURAL JOURNALS OF THE DAY.

"O Fortunatos nimium sua si bona norint
"Agricolas." . . . . *Virg.*

Vol. V.—*New Series.* **BALTIMORE, MD. MARCH 13, 1844.** **No. 43**

Terms—The "American Farmer" is published every Wednesday at $2.50 per ann., in advance, or $3 if not paid within 6 months. 5 copies for one year for $10. Advertisements not exceeding 16 lines inserted three times for $1 and 25cents for each additional insertion—larger ones in proportion. ☞Communications and letters to be directed to Samuel Sands, publisher, corner of Baltimore & North s

BY THE HOUSE OF DELEGATES OF MARYLAND,

March 2, 1844.

[Read and ordered to be printed.]

Report of the Committee on Agriculture,

Relative to the Application of Lime to the different Qualities of Soil, and the

USE OF CALCAREOUS MATTER

FOR

AGRICULTURAL PURPOSES.

In obedience to an order of the House of the 27th January,

The Committee on Agriculture, to which was referred the order submitted by Mr. Smith, on the 27th of January, beg leave to

REPORT:

That an increased production from the soil, effected by the application of lime has by no means been a discovery of modern times. As it exists in marl, it was long used by the ancient Greeks, who probably knew not that they were applying lime. The Romans were aware of the value of marl, but its existence in Italy was not known till after the fall of the Roman Empire. When they pushed their conquests into Gaul and Britain, they found the barbarian farmers, as they were considered, manuring their lands with marl, which they have continued to do to the present day. The application of calcined stone or lime to land in Europe commenced at a later period, perhaps but little before the beginning of our era. The Chinese now use it, and no doubt have been in the practice from a remote period. Since the revival of letters the attention of scientific men has been devoted to the rationale of its action upon the land. They made little progress, however, until within a few years past. The discoveries of Saussure, Davy, Chaptal, Sprengel, Boussingault and a host of other eminent enquirers into the relations of chemistry to agriculture and vegetable and animal physiology, laid before the world a mass of valuable facts, which the gigantic mind of Liebig has enabled him to generalise, and to develope light and certainty where much darkness and mystery formerly existed. The principles adopted in his investigations, brought him to conclusions which seem evidently founded upon the immutable laws of nature. We may safely assert that a new era has dawned upon agriculture and physiology.

On the continent of Europe where it is esteemed the duty of the different governments to encourage agriculture as far as lies in their power, we find many able men under their fostering care, devoting themselves to the important occupation of bringing science to the aid of agriculture, and a flood of light is being shed upon the subject of rendering the soil more productive. In England we find them fully alive to the subject; her nobles and gentry, who were in times past disposed to rest their claims for honorable distinction upon their success in making war upon their enemies or upon one another, are now found entering the lists to compete with each other, in the less chivalric, but certainly more useful occupation of raising turnips. The princely fortunes of many of her land holders, enable such as require it, to get sufficient aid from the investigations of scientific men. The works of Professor James F. W. Johnston, who is exclusively devoted to agricultural chemistry, are republished in this country as fast as they issue from the press in England. They are of inestimable value to the farmer.

A few years since, there would have been little use in making the inquiries now proposed to the committee, for the reason that there were too few data to start with; the subject was so much veiled in mystery, that we could have said little more to the farmer than "that as experience proves, that lands cannot for a long period be profitably cultivated without the application of lime in some form or other, it is expedient to use it." Now, however, such a wide field of research is opened to us, that we find it difficult to confine ourselves to those branches of the investigation that we can complete within the time we have allotted for making this report. Whilst we regret that the lateness of the period when the subjects were committed to our charge has prevented a more full examination, and a more systematic arrangement of the matter; we hope, however, our exertions will be found to throw some light on this most interesting subject, and be of some little pratical use at least, to our agricultural community—and make still more manifest the importance of further pursuing the subject of the application of science to agriculture, so that we may keep pace with the improvements of the age.

Section 1.—*Of the properties of lime and some of its compounds the most important to agriculture.*

Lime is not, as was formerly supposed, a simple substance; it is composed of a metallic substance called calcium united to oxygen. When pure it is a white brittle earthy solid, having alkaline properties, whose specific gravity is to that of water as 2 3-10 to 1. It is *per se* one of the most infusible of known bodes, having a strong affinity for water, and when combining rapidly therewith a considerable degree of heat is developed, as may be observed when it is slacking. The heat is often sufficient to ignite wood and other combustibles. The compound of lime and water, constitutes what is called *hydrate of lime*, or water slacked lime, its constitution is

Lime,	76 parts.
Water,	24 "

This hydrate is sparingly soluble in water, and more so in cold than in warm water. About 700 grains of pure water, free from carbonic acid, will dissolve 1 grain of lime.

Carbonate of lime, (common limestone,) consists of

Lime,	56 parts.
Carbonic acid,	44 "
	100

It constitutes the great mass of the limestone and chalk which form so large a portion of the crust of the earth. It is the principal constituent of shells, and forms the calcareous matter of marls.

Carbonate of lime is nearly if not quite insoluble in pure water, but is readily dissolved in water containing carbonic acid, and as rain and snow water always contain carbonic acid, lime upon or near the surface of the earth is unceasingly being dissolved and diminished in quantity—an exceedingly interesting fact in an agricultural point of view.

Lime in combination with phosporic acid is called *phosphate of lime*, and sometimes "bone earth." It constitutes, with a smaller proportion of carbonate of lime, nearly all the earthy matter of bones. It also exists in small proportion in shells.

It is insoluble in pure water, but the presence of acids (even the weakest of all, carbonic acid,) renders it soluble. Phosphoric acid and lime unite in several proportions, but the combination that most concerns us, is that which forms part of bones and shell, which is

Phosphoric acid,	52 parts.
Lime,	48 "
	100

Sulphate of lime, is well known under the names of *gypsum* or *plaster of paris*, and when pure consists of

Sulphuric acid,	46 parts.
Lime,	33
Water,	21
	100

Having thus briefly glanced at some of the properties and combinations of lime, we proceed to treat of lime as a manure, &c.

Section 2.—*Of lime as a manure or as a constituent to plants.*

The elementary constituents of all plants, for the most part consist of carbon, hydrogen, oxygen and nitrogen. The three first exists in the largest proportion, and form the great bulk of the plant, the last is equally necessary, and with the rest, form the albumen, gluten and other introgenous compounds which principally abound in the seeds and juices of plants. The air of our atmosphere always contains water, carbonic acid and ammonia, which furnish to plants the above named elements nearly equal perhaps to their wants, after the first stages of their growth. In former days these were believed to be all that were essential to vegetation, but modern science has demonstrated that certain mineral substances, which the results of combustion proved always to exist in plants, were quite as essential to their growth.

We might illustrate this position by the investigation of animal and vegetable physiology, but we must avoid digressing more than is absolutely necessary to the proper understanding of the subject under consideration, and be content with the remark, that nature has decreed that plants shall receive certain matters, in a great part from the atmosphere, and those we call their organic part—but their mineral constituents *must* come from the soil. The most important of these mineral substances are potash, soda, lime, silica, magnesia, iron, manganese, phosphorus, sulphur, chlorine and iodine. There are others found in smaller proportion in plants, but most of these are perhaps non-essentials.

The mineral matters constitute, generally, from one to two per cent. of the living plant, and are what we call ashes, when the combustible parts have been burned away. Their state of combination is varied by every different plant.

The phosphorus is, perhaps, always united to oxygen, forming phosphoic acid, which in plants usually exists in combination with lime or magnesia, or with both, as in the grain of wheat, and in many other seeds. The sulphur, in most instances, exists as sulphuric acid, which is generally united with lime in plants, but often is combined with potash, soda, &c.; the chlorine is a combination with the potash, or forms with the soda the well known common salt. Besides these mineral acids, various other acids, the products of vegetable organism, form in plants, compounds with the above named alkalies, earths and metallic oxides.

Before this subject was sufficiently investigated, it was common to consider only such substances as furnished *vegetable* food to plants "*manures*," whilst mineral or inorganic matters such as lime, potash, &c. it was supposed entered the plants to act as stimulants or to have some undefinable mechanical action. Some are sufficiently fanciful yet to cling to the stimulating theory, but the exact and rigid rules for scientific investigation of the present age permits not the indulgence of fancy, which has been transferred from the more exact sciences to poetry. Each plant always contains certain mineral or organic compounds, (subject to little variation, as will be seen) in whatever part of the world the plant may have its existence. If these essentials be deficient, the plant will lan-

guish and produce a stunted growth: if entirely absent from the soil the plant will die soon after, exhausting the minute quantity which the seed contained. In order to show what is necessary to some of our most important plants, we will state the quantities and kinds that exist in Tobacco, Wheat and Clover.

1,000 lbs. of dried Tobacco leaves contain:

Chloride of potassium,	.63	lbs.
Sulphate of "	.50	"
Potassa combined with nitre and malic acids,	.91	"
Phosphate of lime,	1.66	"
Lime combined with malic acid,	2 44	"
Silica (same as flint or quarts,)	.88	"
Being nearly seven pounds.	6.92	

1,000 lbs. of Wheat and the 2,000 lbs. of Straw that has borne it contains:

	Grain.	Straw.	Total
Silica, (sand)	4.00	57.40	61.40
Potash,	2 25	.40	2.65
Soda,	2.40	.60	3.00
Magnseia,	.90	.64	1.54
Alumina, (clay)	.26	1.80	2.06
Sulphuaic acid, (oil of vitrol)	.50	.74	1.24
Phosphoric acid,	.40	3.40	3.80
Chlorine,	.10	.60	.70
Lime,	.96	4.80	5·76
The total being 83 15-100 pounds.	11.77	70.38	83.15

1,000 of Red Clover when made into hay contains:

Lime	27.80	lbs.
Pot-ash,	19 95	"
Soda,	5.29	"
Magnesi,	3.33	"
Silica, (sand)	3.61	"
Sulphuric acid,	4.47	"
Phosphoric acid,	6.57	"
Chlorine,	3.62	"
	74.64	"

Besides traces of Alumina and Iron.*

It has been ascertained that 1.000 lbs. of maize or Indian corn contain 15 lbs. of the Phosphate and Sulphate of lime, but a complete analysis of the whole plant has not yet been made as far as has come to our knowledge. Every soil depends for its fertility mainly upon its containing due proportions of certain mineral matters. We find however, that nature's laws admit plants (in cases where one or more of these are deficient,) to substitute certain others, but this is confined within well defined limits. For instance, one alkali or alkaline earth may supply in part the place of another, and some acid may be partly supplied by others, but here those partial substitutions stop. As an instance for illustration, we may give the fact, that where soda and pot-ash are deficient in a soil, their place is partly supplied by lime, but if all three be absent, the soil will be absolutely sterile, however well we might manage it in all other respects, except in supplying the deficiency. Hence we would remark, that to determine whether lime "acts as a manure," we must know in what sense the term is used. If we mean by manure, such substances as upon being added to a soil, increase the growth of plants therein, it follows that lime as well as many other matters essential to vegetation, acts as manures, only in such soils as do not contain them in due proportion. We shall conclude this branch of our investigation with the following maxims, viz:

1. Lime is an essential constituent of plants.
2. That plants will not thrive when it is entirely absent from the soil.

*Note.—These results shew that clover contains in equal weights nearly three times the amount of inorganic matters contained in the whole wheat plant deducting the roots. If we deduct the silica which abounds in all soils we find that clover contains nearly *ten times* the quantity of minerals, as wheat. One great effect in clover is the pumping up, as it were, by means of its long and descending roots these necessary materials from depths to which Tobacco, grains, grasses, &c., do not reach. The crop being allowed to rot on the ground or fed to stock whose manure is put on the fields, give a large quantity of mineral matters which we believe are more effective to the succeeding crop than the vegetable part.

3. Chemical analysis has demonstrated that lime exists in all fertile soils, that have hitherto been accurately analysed.

4. In such soils as are absolutely sterile, it has been proven when they have been analysed that some of the essential inorganic substances are absent; and that it is lime very frequently.

Having hitherto treated of lime only as a mineral constituent of plants, we proceed to show that lime and the alkalies serve other important purposes of vegetation.

SECTION 3.—*Of the effects of lime upon the substances composing the soil.*

Lime and the alkalies act energetically upon organic textures living or dead; the action of the alkalies pot-ash and soda, is but lightly lessened even when they are in combination with carbonic acid. The action of carbonate of lime however, is far more feeble than quick lime. In hastening vegetable decomposition the alkalies and lime also, accelerate the liberation of the inorganic matters contained therein, and at the same time, produce a more ready supply of humus, useful to the plant in all stages of its growth, but more particularly so, when young, and before it has many leaves to get sufficient supplies of carbonic acid, ammonia and water from the atmosphere. Lime and the alkalies decompose many stoney bodies and liberate matters useful to vegetation.

Most of the rocks of Maryland contain lime, pot-ash and soda, and sometimes all three exist in the same rock. Soils which have not been produced by matter deposited by water (called transported soils,) are the result of the slow disintegration of rocks, and when sufficient of such finely disintegrated matter accumulates upon the rock, plants begin to grow in the soil so formed. The soils of our territory above tide-water have been thus formed, whilst the soil of the lower country has been for the most part transported by water. We should expect therefore, such matters as existed in the rocks would be in the soil and such is the fact, although portions of some of the constituents are carried off in solution. An important use then of lime, is further to promote the decomposition of the mineral constituents of the soil, in order to eliminate, such as plants require. We cannot conceive an arable soil to exist, in which lime will not, in this manner, do good service. The mechanical texture of soils is improved by the use of lime. All farmers know how necessary it is that a soil should neither be so stiff as to prevent sufficient access of air and water, nor so light as too readily to permit water to escape by percolation or evaporation. When a soil is loose or friable it is owing to the presence of sand and other small grains of rocks not sufficiently disintegrated. Lime continues the process of decomposition or disintegration and of course produces a finer texture to the soil, at the same time that it liberates a further supply of the alkalies and other useful matters they may contain. So much then for the action of lime upon the mineral constituents of the soil. We incline to the belief, that a more important use to us is in its action upon the decaying vegetable and animal matter in the soil. It has long been known that the beneficial effects of lime are more striking when applied to soils which abound in organic matter, such for instance as grass or clover fields. This is due to its hastening the decay of the vegetable matter.

We should bear in mind that this occasions a more rapid exhaustion of these matters in the soil, in the regular course of cropping, unless supplied by manures containing the same elementary principles which have been abstracted.

To be Continued.

LEGISLATIVE AGRICULTURAL CONVERSATIONS.

We continue to-day the Agricultural Conversations being held by the Massachusetts Legislature, and copy as before from the New England Farmer. The subject discussed at this meeting was

FARM IMPLEMENTS,

a subject which every practical farmer and planter will admit of vital importance to agricultural success, as without good tools, well constituted and in good order, the work of a farm cannot be perfectly performed. Nor will it be denied, that without labor saving machinery, at present prices its profits would prove precarious in the extreme.

SEVENTH AGRICULTURAL MEETING AT THE STATE HOUSE—FEB. 20.

The subject under discussion was "Farm Tools." Hon. Josiah Quincy, jr. presided. Mr. *Buckminster*, of the "Ploughman," opened the meeting with the following remarks, which we take from his paper:

"The *Plow* would be acknowledged by all farmers to be the most important tool in agriculture. He would not go back and inquire when the plow was first introduced, or where it was first used: he would look back 25 years, and compare our present plows with those in common use at that period.

"Plows were then made in a form that varied but little in appearance from our best modern plows; but the mould-board—now called the mould-plate—was so fitted that there was a break between it and the share; the furrow would not rise easily, as it had not a smooth inclined plane to rise on. Now, the mould-plate is so fitted to the share, that the furrow rises without obstruction, on a smooth surface.

"The first cast-iron plows were made quite short, for fear if made long, they would be broken on being thrown against rocks; but now, better metal is used, and plow-makers venture to make them nearly as long as the old-fashioned wooden ones. The short plows work well enough in rough and stony land, but in plain fields where one great object is to turn flat and bury all the surface mattery, long plows work best.

"It has been objected that long plows occasion more friction than short ones: the speaker thought this a mistake, and that the furrow would rise as easily on a long mould-plate as on a short one; it would rise more gradually, but not up so steep an ascent. The plow would more resemble a thin wedge, which enters more easily than a thick one; the furrow would be longer on the rise, but would not mount so steep a hill.

"He thought, notwithstanding all that had been written on the improvement of plows, that the smooth surface of the plate and the regular rising of the furrow, were the chief cause of our being able to plow with one-half the team that was formerly required.

"*The harrow* follows the plow. He preferred the simple square harrow to the crotch, or three-cornered kind, for in using the latter, the team draws the principal teeth up from the soil. For a horse he preferred a square harrow with sixteen teeth—made in the simple manner—to any one of complicated form.

"*The roller* is an instrument more recently brought into use here. He had seen large and small ones; some 8 feet long, 5 feet in diameter, and a joint in the middle to facilitate turning at the corners of fields. Some cost over 50 dollars, but they are not so good as those that cost but 5. They cover too broad a surface and make too little impression on the sod. A roller may be made so small as to cause too much labor in drawing; some are made of logs only one foot in diameter; these are built too low and cannot be well drawn over loose stones or even over earth. A roller should be 4 feet or 4½ feet long and 2 to 2½ feet in diameter. One horse will draw such a one with the driver on it, and it may be made for 5 dollars. Two plank wheels are first made, then narrow strips of plank are spiked on, and thin iron hoops are drove on to keep the planks tight. Planks will last longer than a log.

"By rolling well we make the surface better for both the scythe and for the horse rake; we beat down the surface only, and leave the soil under it as light as ever; but a harrow, with long teeth, leaves all the earth heavy except a little matter at the surface. The roller often sinks small stones and saves picking.

"*The horse rake* is an important tool, much labor may be saved by its use. When made in the simplest form it is sold for four dollars, and this is the best form for use. One man will rake an acre in half an hour, yet with a hand rake he will be half a day. He said a man bought one of him last summer in West Cambridge, but on condition that he should himself go out there and rake an acre in half an hour; he went and raked an acre perfectly clean within the half hour, and to the satisfaction of the purchaser.

"*Forks* he would name. By making them of good steel the tines are now only one fourth as large as formerly; consequently they enter the manure readily and it is easily thrown off again, so that a man may fill a cart with one half the labor that was requird with the old clumsy tines.

"*Iron shovels* too are substituted for the old wooden

shovel, shod with iron, and they enter into the soil as much more easily than the wooden ones as the cast iron ploughs do more easily than the wooden mould-boards. He could go no farther, for his half hour had elapsed."

Mr. *Dodge* observed that the previous speaker seemed to be in favor of using horses in harrowing, rolling, &c., but he should suppose it would be hard work, and that it was more appropriate to use oxen: this was his custom. He thought we should be slow to substitute the horse for ox labor. He should hardly argue with Mr. Buckminster that the roller he had described could be drawn with ease by a single horse. He thought it was an important question how far we should go in adopting the many and expensive implements used in modern English husbandry. He was not in favor of a profuse expenditure in tools; nor did he think it good policy to be niggardly in this respect. Our climate was rugged and labor high, and we must bring in the aid of improved implements to save labor and time.

Having purchased good implements, the next thing was to use them well. They should be cleaned after use, and then properly housed. He spoke of the good effects which the temperance reformation had produced in the care of tools; formerly, when under the influence of strong drink, the hired men broke and injured many more than the sober men of the present time. *After eleven o'clock*, harrows, plows, &c., were apt to come in contact with stumps and rocks; but such accidents were comparatively rare now.

He thought he had seen a roller made of solid wood, 1½ foot in diameter and 6 feet long, that he should prefer to the one described by the previous speaker.

He spoke of the value of the "scruffle hoe," which he had never used until the last summer, as being a very excellent instrument in a nursery, and for other purposes, especially in root crops.

The editor of this paper said he had used the scruffler, or Dutch hoe, for many years, and considered it indispensible in the cultivation of root crops and for garden purposes: that he could weed one acre of ground in the same time that four men would require to go over the same quantity of land with hoes, and the work would be done much better: the handle of the instrument should be so long that the operator may stand erect; the work may then be accomplished with ease. The scruffler cuts forward and backward.

Mr. *Merriam*, of Auburn, said he considered the plow one of the most useful tools. He was the first person who introduced a cast iron plow into Auburn. His neighbors laughed at him at first, but now those plows are in general use among them. As to the harrow, he was somewhat undecided which form was best; but was inclined to believe the triangular shape was most preferable. He disliked, however, to use the harrow at any rate, unless the ground was very rough, as it had a tendency to make the ground heavy. He considered the cultivator a good instrument to lighten ground. Could not dispense with a roller: thought it too heavy work for one horse: uses one 6 feet long and 4 in diameter, with three cattle: sowing down to grass: and in the spring, upon his young grass, to press down the roots which have been thrown out by frost. He uses a horse rake, and could not do without it; he has raked an acre in 15 minutes, but considers it good work to rake an acre in 30 minutes. He said it was worth as much to him in hay-time as a man.

Mr. *Morse*, of Shelburne, said he was not a farmer, but a manufacturer of scythes. There was a great difference in their make at the present time from that there was 30 years ago. The complaint now is that they do not last; that the steel is soon gone; but the difficulty was, the farmers would have them made *light*, which he thought was not correct; as a person could not mow so easy with a light scythe as he could with one that was heavier; nor would the light ones be so durable. As to length, some wanted them only 3 feet 3 inches, while others would have them over 4 feet. He thought a long scythe the best, as with it he could take more of a drawing stroke.

Mr. *Knowles*, of Eastham, spoke of the scythes used in mowing salt grass: there was much difficulty in using narrow ones, and it was necessary to use those that were wide and thin.

Mr. *Stone*, of Beverly, spoke of the improvements which had been made in various agricultural implements, which, for want of room, we shall be obliged to pass over.

Mr. *Cole* described a cheap mode of constructing a hay wagon, and grain cradle, and of the mode of sharpening scythes in Pennsylvania, by hammering the edge, instead of grinding it!

The President, Mr. *Quincy*, said there was one implement which had not been alluded to, which had been used in England with great success, and which had not been introduced, he believed, into this country, and that was the *subsoil plow*. It has been stated in returns made before Parliament, that where it had been used in connexion with thorough draining, the crops had been increased four fold. It pulverized the ground to the depth of 12 to 24 inches, without bringing the subsoil to the surface. It was regarded as an instrument calculated to effect a great revolution in agriculture. He remarked that something had been said about the first invention of the plow. It was probably not known where it did originate. He believed there was no account of its first use; but he recollected having his attention first called to it in the scriptures, where it was stated that when the prophet Elijah called upon Elisha, he found him plowing with 12 yoke of oxen; upon which passage a Dutch commentator made the remark, that "no wonder Elisha was willing to quit plowing for prophecying, if it required 12 yoke of oxen to plow his land."

Mr *Allen*, of Pembroke, said farmers were not generally flush in funds, and it would not do for them to purchase every new implement that was offered: he had suffered somewhat by so doing. His tool house was full, and he had begun to *stack out*. He had tried long and short plows, and found his short one ran easiest, but the long one turned the flattest. He uses the triangular harrow, but does not like to have one used much on his ground. As to the rollers, he thought one made of a hard-wood log was the best: he had one of that description which had been in use 17 years. He considered the roller a great improvement, and should recommend all farmers to use it. The care of tools and implements is of great impotance, but his practice is contrary to his doctrine; for, although he has *only* five barns, all his carts and implements are not all housed. Tools work better when cleaned and housed after using, as they would be free from rust.

He had a different opinion of the value of the horse-rake from the gentleman who had spoken of it. He thought their general use would lead to a careless way of making hay. He had seen a man in Berkshire county, who cut 100 tons with the assistance of three boys only. How he contrived to mow it, he knew not; but he found he let it lay in the swarth until it was made, and then drew it together hastily with the horse-rake, and as he thought, must be carted into the barn in a state not very favorable for the quality of the hay. He thought the raking was but a small part of the labor of haying.

Dr. *Gardner*, of Seekonk, was satisfied that the horse-rake saves him the labor of four hands if not of six.

Mr. *B. V. French* said the Chair was under a mistake in regard to the introduction of the subsoil plow: he had one which he had used with much benefit for a number of years. He stirs the ground to the depth of 17 to 20 inches deep. It was stated in England, that there was no soil but what was benefitted by the use of it. In Scotland, where it had been extensively used in connexion with *thorough draining*, they now obtain 90 bushels of oats, where before only 30 bushels to the acre was an average harvest.

From Hovey's Horticultural Magazine.

Experiments on the Cultivation of Plants in Charcoal.

I perceive in the horticultural papers received by the last steamship, that there is an animated discussion on the value of charcoal in horticulture, and that Mr. Robert Rigg, an excellent chemist, has proceeded so far as to publish a book, with the extraordinary assertion that carbon is a compound body made of plants. Assent to this proposition cannot of course be expected from chemistry, in its present state: but we do not know to what strange discoveries the searching inquisitiveness into the laws of nature, of the present age, may lead.

Having made various experiments on the action of charcoal, for the last two years, I have concluded to add my share to the discussion.

The first view I took of the value of charcoal in horticulture, arose from the arguments on the different powers of well rotted and of fresh manure; my prejudice, from constant practice, being rather in favor of the former. And one of my *imaginary* reasons for this prejudice, (for proof was not to be expected,) was, that the carbon of the vegetable part of the old manure was reduced by fermentation and complete decomposition (*combustion*, Liebig,) to the finest possible state of comminution, such as is totally impossible to imitate by the most laborious mechanical pulverization. In this finest of all states, carbon, if used at all by the living vegetable, could be most easily appropriated. My experiments were, therefore, all made with the finest pulverized wood charcoal I could procure, such as is used in making gunpowder.

1st. I planted a young, thrifty plant of Daphne odora in this charcoal altogether: in 12 months it was alive, the leaves quite yellow. On examining the roots, they had not in the least increased or altered. I then repotted it in loam, with one quarter charcoal, and watered with a very weak solution of nitrate of soda: in four weeks the leaves had become of a dark blackish green, and the plant was beginning to push vigorously.

2d. I planted a fine root of Fuchsia fulgens, with a stem, in charcoal alone. It immediately began to vegetate; the leaves were, however, extremely diminutive, and soon dropped off; the flowers appeared also diminutive, and finally dropped off likewise just after opening. It then, with the others, went to rest; but to my surprise, in August it began to vegetate and went precisely through the same process as in spring—others which were by its side, remaining dormant: after this it went again to rest.

3d. I potted several seedling camellias in one quarter charcoal, one quarter old manure, one half loam; these grew with great luxuriance, and the color of the foliage was dark, healthy green.

4th. I potted several young pelargoniums with various quantities of charcoal, never exceeding one quarter, often very much less. In these the effect was the same, both coming very near to the luxuriance and size of foliage of those treated with guano.

In August last, I made up my mind to re-pot and top-dress a large number of exotic plants, of various kinds, many of which were in a bad state from neglect; of these the chief number were camellias. I made up a compost, consisting of about two-thirds Roxbury fresh loam, and one-third a compost, chiefly consisting of old manure: to this I added about one-fortieth part of charcoal, and had the whole very carefully and intimately mixed with this I operated. In September, when I thought the earth had got well settled round the roots, I began to water, every Saturday, with water in which guano had been mixed, in the quantity of about one ounce to ten gallons.

I was perfectly astonished at the alteration which appeared in about four weeks, in the general health of all the plants—it seemed to me like magic; and many who visited the Public Conservatory previous to the late calamitous fire, can bear testimony to their beauty and luxuriance. The earth of one large camellia, (double white,) with about 250 blooms, was nearly altogether changed, the tub having fallen off with much of the earth. I hardly expected to save the blossoms, but they opened in as great splendor as the others. It seems to me that the period of the opening of the flowers was also generally accelerated. We had 20 or 30 out the first week in November, and the first week in December, just previous to the fire, I counted above 500 in full beauty; this was certainly earlier than we had them in previous years.

Passiflora Loudonii, which, under the best of common cultivation, has always yellow and unhealthy looking leaves, was placed in this mixture, with the addition of charcoal drainage. The rapid change in its appearance was surprising, and although, from unavoidable circumstances, it was removed into this soil just previous to flowering, yet instead of being checked, fresh flower racemes shot forth, and, with the others, opened their beautiful blossoms in the greatest splendor; the foliage becoming of a fine healthy green, and spread open, not curled in at the edges.

My impression from these trials is, that although charcoal alone is nearly useless, yet when mixed in due proportion with the earths and salts, usually found in soils and manures, its presence is highly beneficial, and greatly promotes the luxuriance of vegetation, as far as regards stems and leaves. Of its value in the production of flowers and seeds, I am not, for the reasons before stated, able to give an opinion of any worth.

It may be thought, and probably is in part true, that much of the luxuriance of the last named experiments arose from the use of guano water; but from other experiments with charcoal, instituted for the purpose of making comparisons with guano, in which of course none was used, I cannot hesitate to believe that some portion of this luxuriance was also due to the charcoal.

Boston, Jan. 24, 1844. J. E. Teschemacher.

THE AMERICAN FARMER.

PUBLISHED BY SAMUEL SANDS.

AGRICULTURAL REPORT—We are indebted to the attention of John Newcomer, esq. of the Senate, and D. W. Naill and J. Carroll, jr. esqs. of the House of Delegates of Maryland, for copies of the "*Report of the Committee on Agriculture relative to the application of Lime to the different qualities of soil, and the use of Calcareous matter for Agricultural purposes*, made to the House of Delegates of the General Assembly of Maryland; and we take especial pleasure in commencing its publication this week in our columns. It traces the use of lime as a fertilizer from its earliest known history, treats of the properties of lime and some of its compounds the most important to agriculture, of which it gives anyalyses; very properly considers lime in the light of a *manure*, and illustrates this position by shewing it to be a constituent of plants, and hence contributing to their sustenance. This is proven very clearly by various analyses of plants, by whose elemental properties the presence of the mineral is established to demonstration; and hence the deduction, that that which forms a material part of a body, must necessarily be essential to it as a nutrient substance. The effects of lime upon the component substances of the soil are very forcibly, though succinctly, shewn; so also is its effect upon the quality of crops, as well as upon matters injurious to them. The best modes of applying lime; the quantity to be applied, per acre; the application and value of marls, and of gypsum, are each and all dwelt upon with cogency; and the report concludes with a series of happy remarks, illustrative of the benefits to the state from the use of calcareous manures, adducing the irresistible fact in support of the argument, that it has stayed the current of emigration; it recommends the legislature to procure analyses of the soils of the state, together with certain information connected with the agricultural products of our lands before and subsequent to their being limed, "to the end that a basis may be formed upon which an intelligent and profitable system of husbandry may be established."

The Committee consists of Messrs. *Naill, Poultney, Ghislen, Griffith* and *Mann*; and without pretending to know who is the author, we may be permitted to observe, that he deserves the thanks of every Marylander, as he has produced to the public eye a subject upon which it may reflect with profit, and has, by so doing, opened the way to future benefits, which are incalculable, because, being cumulative in their very nature and effects, they must increase in volume and magnitude with every succeeding year.

If we were a Yankee, we would venture upon a *guess*, that our good friend *Naill* had had a finger in the concocting of those rare ingredients which render the *pie* so acceptable to the *taste*. If so, "*Old Frederick*" may well feel proud that she had clothed him with the power of doing the state such essential service.

SUBSOIL PLOUGH.—In the *Seventh Agricultural Conversation* held by the members of the Massachusetts legislature, a report of which will be found in another column,

"Mr. *Quincy* said that there was one implement which had not been alluded to, which had been used in England with great success, and which had *not been introduced*, he believed, into this country, and that was the *subsoil plough*."

We recur to this assertion, in this place, for the two-fold purpose of correcting the erroneous impression which appears to rest upon Mr. Quincy's mind, and of doing justice to the enterprise of three of our fellow townsmen. Messrs. *Robert Sinclair, Jr. & Co.*, and Mr. *Jonathan S. Eastman*, have, each *introduced* these valuable implements into the *country*, and are now engaged in manufacturing them. At the last Fair held by the Baltimore County Agricultural Society, each of these houses had a Subsoil plough in the Ploughing Match; to the first named firm the premium of superiority was awarded, after a fair trial by as intelligent a committee of practical farmers as ever ploughed a field, or set in judgment on the operations of a farm; and we are pleased to be able to state that the opinion was universal among the hundreds who attended that match, that the *subsoil plough* is an implement of the very first importance, and that its general introduction in all *sound stiff soils*, is a desideratum of great moment.

We believe that neither of these firms claim any credit for *invention*; the *origin* of the implement being due to England; but they certainly do, each, deserve much praise for the *improvement* they have made upon the *English original*, which, like most of the tools from the father-land, is a most unwieldy affair, not adapted to the uses of our countrymen, as it requires more power of team than can be *profitably* employed with us. This objection does not, however, in the least, rest against the *Improved Subsoil Ploughs* gotten up by Messrs. Robert Sinclair, Jr. & Co. and Mr. Eastman; for, with a span of horses, either of their implements can loosen or pulverize, without turning up the subsoil, fully *nine inches* beneath the body of the soil inverted by the ordinary plough.

We have before remarked that the Improved Subsoil Plough of Messrs. Robert Sinclair, Jr. & Co. received the award of superiority by the Baltimore County Agricultural Society, and it may become us as impartial historians, writing with a view to subserve the cause of truth, and to advance that of husbandry, to say that it was a righteous award; for, of a truth, their implement is one of peculiar excellence, combining strength, simplicity, and ease of draught, with infinite power, steadiness of action, and exactness of execution, qualities which the practical, as well as scientific planter and farmer, will know how to appreciate; for they are qualities which commend themselves alike to the good sense and judgment of all.

We have thus far spoken of the peculiar merits of these particular implements; and the occasion seems to invite a few passing remarks upon the advantages and utility of the operation of subsoil ploughing. We desire what we may advance upon the subject, to be considered merely in the light of *opinion*, but opinion gathered from no little reflection upon the nature of the thing, and from reading of the effects produced by it in England, where it has been pursued for some years. Of personal experience we have had none, and can, therefore, only speak of the experience of others.

The operation of subsoiling consists simply in breaking and pulverizing the subsoil or under-crust of earth to any desirable depth, the subsoil plough following in the track or furrow of the share plough and loosening the substratum without turning up or mixing any portion of it with the upper or surface soil. To us it appears obvious, that the operation as performed must be productive of good, as it extends the pasturage of the plants, without interfering at all with, or decreasing the virtue of, the soil theretofore subjected to the meliorating influence of culture, sun, air and manures. We all know that the roots of most plants, in their downward course, greatly extend beyond the tilth produced by ordinary ploughing. Without entering into any extended investigation as to the depth which particular kinds of plants penetrate the earth, it may be sufficient to say, that the roots of corn, clover and Lucerne, have been traced several feet in the earth; so that, whether the substratum be broken and pulverized by *man*, or not, the roots of many of the plants cultivated by him find their way into the bowels of the earth, greatly beyond the depth of the bed provided for their growth. It is, hence reasonable to presume that, if their instincts did not teach them there was food for them very far beyond the surface soil, they would not seek it there, but would be content to partake of the diet provided for them by the husbandman. That there is less danger than is usually apprehended from substratum feeding, is attested by the fact, that healthful crops are thus annually grown. May we not, then, very fairly conclude, that, if the subsoil does not operate injuriously to the tender rootlets which are now compelled to *force* their way thither, if that *way* was made *easy* for their downward penetration, the benefit derived from such pasturage would be measurably increased? We think the inference legitimate. It is a generally received opinion, that, until the *subsoil* is meliorated by the effects of sun and air, it is improper to subject it to the operation of culture. Suppose we admit the propriety of this opinion—and we are not prepared to gainsay it—does it necessarily follow, that subsoiling would not be beneficial? for whether you break up the under crust or not, the roots, as we have stated, will descend there; and, therefore, if sun and air be essential to the performance of a chemical change in the nature of the subsoil, that change can only be effected by breaking up the pan, pulverizing the earth, and letting in the air and heat, as it must be obvious to every view justified by common sense, that these agents cannot exert their power through an unbroken mass buried many inches below the surface. But by thus preparing the under earth for the admission of atmospheric influence, we would so improve its condition, as would enable us, in the course of a single rotation, to turn up an inch or two of the subsoil, and to that amount deepen the surface, thus might we, by this deepening process, restore to culture many of the salts which had been lost through their tendency to sink. Such appears to us to be rational conclusions.

We have thrown out these views, because we are desirous of attracting the attention of farmers generally to the advantages of subsoil ploughing, the period being at hand when judicious experiments might be made to test the utility of the operation; and we will here repeat the wish which we have often expressed, that some of our intelligent subscribers will institute such experiments as will test the efficacy or inefficacy of subsoil ploughing—our own opinion is, that it would add twenty-five per cent. to the product of the corn crop, and effectually prevent the winter-killing of wheat in all well drained or naturally and healthfully dry lands—and we will add our belief, that subsoiling would be unavailable in any wet soils.

THE COTTON PLANT, ITS ORIGIN, &c.

[A Memoir on the origin, cultivation and uses of Cotton; from the earliest ages to the present time, with especial reference to the Sea-Island Cotton Plant, including the improvements in its cultivation, and the preparation of the wool, &c. in Georgia and South Carolina; Read before the Agricultural Society of St. John's, Colleton, Nov. 13, 1843—by the Hon. Whitemarsh B. Seabrook, president of the State Agricultural Society of South Carolina.]

We have been obligingly favored with a copy of the above *memoir*, and do but simple justice to the author when we say, that it is a composition of transcendant power and profound research, but as we have only time to thus briefly notice it at present, we shall recur to its instructive pages again, when more at leisure, to give our readers some faint idea of its contents; sufficient however, we hope, to place its learned and patient author before his countrymen in the attitude of a light—a brilliant light—of the age. The pamphlet covers 62 octavo pages, and besides comprising more learning upon the interesting subject of the cotton plant, than we had dreamed of in our philosophy, numerous statistical facts connected with the subjects, it is written in a style so chaste as to commend it to every intelligent reader—to every one who can justly appreciate the trophies of mind—but while we impress our conception of the gifted author's merit upon our page, let us also do justice to the mechanical execution of the pamphlet, and as our paper admonishes us to be brief, we can but add, that Messrs. *Miller & Browne* of Charleston, need well be proud of their agency in its getting up, as it will favorably compare with the best book work in any part of our country; but, perhaps, some portion of the *skill* they have displayed owes its mastery to the excellence of the *memoir*.

The *New York State Agricultural Society*, will hold its next annual Fair at *Poughkeepsie*, on the 18th and 19th of September next.

LARGE CROPS OF CORN.—Corn-planters who are in the habit of growing from 4 to 6 barrels of corn to the acre, are very incredulous as to the possibility of raising a hundred bushels to the acre; and yet, there are a thousand instances of the fact recorded from time to time in our journal. Could we spare the time and space we could fill a dozen papers with such facts, well attested; but, as

we have neither at our disposal, we shall content ourself for the present by copying the following article from the Albany Cultivator. Its re-publication should, and we trust will, excite a laudable spirit of *rivalry*, as what one man has done another may do:

The great crop of the United States, whether we look at quantity or value, is unquestionably our corn crop. Four hundred and fifty millions of bushels in 1840, and probably 500 millions in 1842, show the importance of this grain to us. And yet the quantity now grown is nothing, a mere drop in the bucket, compared with what we might do, should circumstances render it advisable to increase the production to an extent that might easily be reached on the present cultivated lands of the Union. In order to show at a glance what might be done, we have taken the pains to collect a few instances of good crops that have been grown among us, and would remark that on a very large portion of our soils, in favorable seasons, and with the cultivation corn should receive, crops like the ones named may as well be grown as inferior ones. It is true, we now and then meet with a farmer or writer who asserts that no man ever saw 75 bushels of corn grow on an acre, and that the farmer should be contented with 25; but the only emotions excited by such are contempt for the ignorant confidence shown, and pity that in this country men should be found so far behind the times.

No. of Acres.	Product per acre.	Whole Product.	Name and place of cultivator.	Year.
1	136	136	R. H. Rhose, Silver Lake, Penn.	1820
1	118	118	John Stevens, Hoboken, N. J.	1820
1	172½	172	J. & M. Pratt, Madison, N. Y.	1822
4	170	680	" " " "	1824
1	132	132	Samuel Chidsey, Cayuga, N. Y.	1819
8	112	896	Earl Stimson, Saratoga, N. Y.	1823
1	174	174	B. Bartlett, Eaton, Madison co., N. Y.	1823
1	116	116	T. & H. Little, Newburyport, Mass.	1822
1	115	115	" " " "	1823
1	142	142	Mr. Wilmarth, Taunton, Mass.	1825
5	108	540	Charles Bugbee, Palmer, Mass.	1831
1	140	140	Benjamin Butler, Chenango, N. Y.	1831
1–136		202	Henry Sprague, Worcester, Mass.	1831
1	103	103	"Old Farmer," Rhode Island,	1833
1–12	100	130	S. Lathrop, W. Springfield, Mass.	1835
1	108	108	R. H. Sheldon, Cayuga co., N. Y.	1838
1	110	110	E. Humphreys, Caledonia, N. Y.	1837
1	150	150	——— Montreal, Canada,	1838
1	131	131	R. Lamprey, Moultonborouah, N. H.	1839
1	116	116	Mr. Brown, Strafford, N. H.	1839
1	130	130	P. P. Pilsbury, Tuftonborough, N. H.	1839
1	144	144	J. F. Osborn, Cayuga co., N. Y.	1841
1	121	121	J. Sherman, " "	1841
1	112	112	" " "	1841
1	120	120	Mr. Ellsworth, Conn.	1840
1	120	120	W. Ingalls, Oswego co., N. Y.	1839
7		1,352	J. Myers, Canton, Ohio,	1840
1	154	154	W. Ingalls, Oswego co., N. Y.	1840
2	116	232	B. Bradley, Bloomfield, N. Y.	1841
1	122	122	Samuel Phelps, Cayuga, N. Y.	1842
1	113	113	Wm. Ingell, Oswego, N. Y.	1842
1	132	132	W. Wilcox, Saratoga, N. Y.	1842

The number of such crops, where the product exceeded 100 bushels per acre, might be extended to a great length from the list in our possession, but the above is sufficient.—Still we imagine some farmers will say, (some have said so) that the man who puts manure and labor enough on an acre to get 100 bushels of corn, is a loser. We would ask how? A man may cultivate an acre of corn and get 30 bushels an acre, and he will be a loser; but it is scarcely possible when the product is 100. In such a case, all over 30 bushels may be considered profit. In addition to this, his acre of land is placed in a condition to produce more good crops, and the additional amount these is to be added to the list of profits. The man who has brought 30 acres of land to such a state that it will produce 100 bushels of corn per acre, is far better off than the one who has 100 acres, yielding only 25 bushels per acre; and of this fact we are happy to find many of our farmers are beginning to be well convinced. It is unnecessary to say the remarks we have made respecting corn are equally applicable to any other grain or grass, and that the grand secret of success is to cultivate no more land than you can make rich.

———

Preservation of Peach Trees.—The editor of the *Southern Planter* was informed by a friend that he had saved his Peach trees from being destroyed by the ravages of the worm, by simply driving a ten penny nail through the body of each, as near the ground as possible. These grew in an orchard, were selected at random, and were the only trees that survived, though treated precisely as the others, with the exception of having a nail driven into each. It is supposed that the salt of iron, afforded by the nail, is offensive to worms, whilst it is harmless, or perhaps even beneficial, says the editor of the Southern Planter, to the tree. The means of cure, if it be one, is easily tried, and should excite experiments.

———

Dr. Lee—Uses of Lime and Ashes.

We have heretofore favored our readers with extracts from the admirable Agricultural Address, delivered by Dr. *Daniel Lee*, of Buffalo, last fall, and we give them below an able paper of his, which we copy from the *New Genesee Farmer*, upon the uses and value of *lime* and *ashes*, as manures. We must confess, that we feel gratified to find the views we have so often advanced, as to the propriety of feeding the soil with periodical *small doses of lime*, sustained by the opinion of so accomplished and scientific a writer as Dr. *Lee*; not because of any flattering unction it may bring to our bump of self esteem, but, because, by the sanction of a teacher of such deserved high authority, the farmer, in *moderate* circumstances, may be encouraged to enter upon the use of *lime*, with the hope of deriving benefit from doling out this great restorer, as feed to his growing crops, in doses "*little and often*," and thus by moderate outlays of money and labor, bring about the fertilization of his soil.

Lime and Ashes.

Albany, Feb. 16, 1844.

These are doubtless about the cheapest, and most available fertilizers within the reach of most farmers in this state. Lime is most serviceable on all clay, loam and muck soils which have been more or less exhausted by undue cropping; or on such as slacked lime in their primitive natural condition.—Ashes whether leached or unleached, are perhaps more valuable to be applied to the same soils in addition to lime. I should prefer to apply a less quantity of each, and give my wheat field the benefit of those indispensable elements in the wheat plant, silica, phosphorous, potash, soda and magnesia always contained in leached ashes, rather than depend entirely on fertilizing with lime alone. I will first explain the nature and operation of lime.

Allow me to state a fact as the basis of my theory: I am informed by Mr. P. B. Porter, Jr., that his father, Judge A. Porter of Niagara Falls, has applied to his farm in that vicinity, over 4000 bushels of unslacked lime, and has realized a gain in his wheat crop—having some years over 100 acres—the first season after the lime was used, sufficient to defray the whole expense of this fertilizer, well spread, at the rate of 40 or 50 bushels per acre, on his fields. It is proper to state that the lime was purchased at six cents a bushel at the kiln, and hauled but half a mile. The increase of crop was estimated at from 4 to 7 bushels per acre—giving a less gain on some acres than on others. This case is deemed the more worthy of note from the circumstance that, the lime was applied to a soil lying upon a lime stone rock, abounding in its pebbles, and therefore might naturally enough be thought not to lack this element in its composition. The result in this case confirms what I have before stated to the readers of the Farmer in an article on the "preparation of the food of vegetables," viz: That the cultivation of the soil, not only robs it of its lime by removing it, as a component part of the crops taken from the fields; but that the lime is largely dissolved in water, after its carbonic acid has been taken from it by the vital action of the roots of plants, and this pure lime thus dissolved, is washed out of the surface soil, partly into rivulets, and partly into the subsoil. The only remedy for this waste is to apply more lime; and if it costs the farmer a high price, he must use more economy in its application—in other words—feed his plants *little* and *often*. The principal use of lime is to correct any acidity there may be in the soil, and especially to absorb carbonic acid and ammonia from the atmosphere—important elements of cultivated plants, which are brought to the earth in all due quantities by falling rains and snows. The roots of plants take these elements from lime agreeably to the laws of vegetable life.—And until the lime be entirely washed out of the soil it will continue to absorb again both carbonic acid and ammonia, and feed them to the roots of plants, which are as greedy to receive their appropriate nourishment with *open mouths* as young robins. A word or two about ashes:

As all the ashes found in a maple tree were dissolved in water before they entered its roots, why do they not all dissolve in water when put up in a leach tub?

Because the soluble silicates of potash and soda that enter the roots of all plants are decomposed by the vital action of such plants, and a considerable portion of the alkaline bases—potash and soda—are returned to the earth to dissolve more silica or flint. Now flint is the *bone of plants*, just as lime is the earth of animal bone. Hence a silicious sandy soil that lacks potash—this alkali being very liable to be washed out of such a soil—is greatly benefitted by the application of ashes. Mark the operation of nature in this matter. There will be sufficient potash even in leached ashes to enable the roots of plants to dissolve a small portion of them.* This silicate of potash or of soda thus dissolved, enters into the pores of roots, passes up into the stem and is there decomposed, and precipitates its insoluble silicate. In other words, the vital functions of the plant transform soluble ashes into insoluble ashes; the free alkalies prevail, like those obtained by leaching ashes, only in a much weaker solution, return to the soil and dissolve *more sand* to be again taken up to give strength to a stem of wheat or grass. Now, lime will not form a soluble silicate with sand or flint; and therefore lime alone on poor sandy soils, such as are to be found in Albany county and on Long Island, will not bring good wheat or grass. Ashes operate much better, for the reasons I have given.

As the subsoil lying under the tilled surface, which has been stirred up and cultivated for 10, 20, or 50 years, abounds in alkalies and alkaline earths, subsoil plowing is of great value in bringing up such elements of fertility to the light, heat, frost, and atmospheric influences of summer and winter. As a general rule, however, it is not best to bring up too much of this stiff soil at once, for it takes time to manufacture it into good surface soil.

My sheet is full, and I must write an article on subsoil plowing and draining. D. L.

———

*Flint is only soluble in an excess of potash or of soda.

———

Texan Grapes.—We have been informed by an intelligent botanist, that twenty five different varieties of the grape have been discovered in the forests of Texas; some of which, when properly cultivated, will yield wine equal to that made from the best imported grapes. The Post Oak grape, which grows so luxuriantly on the hills bordering on the Colorado and other western streams, when cultivated in a good soil, will yield wine of an excellent flavor. There is a variety of grape which abounds on the sandy ridges near the sources of the Guadaloupe, that is called the sand grape; and Europeans who have seen them say that they are superior in flavor to any grapes that they have eaten in Europe. There is also a variety of grape that has recently been discovered in the valley of the Bosque that produces large bunches of white grapes similar in appearance to the sweet water.—Mr. Smith, who has seen them, mentions that they are superior in flavor to the sweet water, and no doubt would improve greatly if cultivated with the care that is usually bestowed on the sweet water variety. We have also learned that there are some varieties of grapes so large that the single berries are often found over two inches in circumference. We hope some of our horticulturists will make experiments in the culture of these varieties—for it is not improbable that they can be so improved as to surpass the varieties that are imported at so great an expense.—*Texan Telegraph.*

———

Experiments with Guano.

We extract the following from an English periodical:

From amongst observations and experiments published by Messrs. Gibbs & Son, and from private sources, we select the following information. In the growth of potatoes, 2½ cwt. of guano to the acre, put into the drills, (which probably would not be more than an ounce to the yard,) its effect was superior to that of the usual quantity of stable manure. Sown on grass, at the rate of an ounce to the square yard, (or at the rate of 300 lbs. to the acre,) its effects have proved highly productive. Whenever guano is intended to be spread broadcast over land, it will be the most convenient mode to effect its regular distribution, by first mixing it with three or four times its bulk

of fine dry loamy earth; and, of course, using a proportionably increased quantity of the mixture. Sir T. F. Buxton, Bart, applied to grass, guano at the rate of 2 cwt. to the acre, and soot 4 cwt. to the acre. The produce was 56 lbs. from a rod manured with soot, and 114 lbs. from a rod dressed with guano. Mr. Banton, of Siesdon, had a field of wheat sown in October. On the 23d of April following, he had six plots, of ¼ of an acre each, accurately measured off, and to these respectively he applied the following manures, at the rate *per acre* mentioned, and obtained the produce *per acre*, as stated against each experiment, viz:

1. Guano, 1½ cwt.	produce,	45 bush.
2. Guano and nitrate of soda, (equal portions,) 1½ cwt. of the mixture,	44	"
3. Nitrate of soda, 1½ cwt.	41	"
4. White caustic lime, 4 tons,	42½	"
5. Lime, 10 cwt., salt 5 cwt., mixed a week previous to its application,	39	"
6. No manure,	39	"

The straw grown on the plot manured with guano, considerably exceeded that of either of the others, while the wheat was of equal weight per bushel.

In another experiment at Wraxhall, Somersetshire, a little over 2½ cwt. of guano, was tried against 12 tons of stable manure, and also against 20 bushels of bones, on wheat. The produce from the guano-manured ground was greatest.

An experiment with a crop of Swede turnips, at the same place, showed the following results: 2½ cwt. of guano, mixed with a like quantity of mould, and half as much powdered charcoal, produced 17 tons of turnips per acre, costing for manure, £1 15s. 5d. 20 tons of stable manure produced 16 tons of turnips, at a cost for manure of £4 14s. 8d. 32 bushels of crushed bones produced 15 tons of turnips, at a cost for manure of £4 6s. 3d.

We have before us many statements from practical men, on the application of guano to almost every description of produce, both of the field and garden; and in all instances where it had been used discreetly, it has proved the most valuable ingredient that has hitherto been tried, as manure. From our own experience, and that of numerous agriculturists with whom we have corresponded, we infer that the practice of the Peruvians in the use of guano, has been duly founded on experience, and is that which proves the most beneficial: we mean the application of it to the plant when in a growing state, in preference to its mixture with the earth before, or at the time of, sowing the seed. Again, the Peruvians are correct in applying water immediately after its application, without which it cannot enter the earth, and be taken up by the roots of the plant. Hence the advantage of applying it in a liquid state, when convenient, or in showery weather.

[The writer closes with some practical suggestions for the guidance of those who may wish to try this manure, the last of which is this:]

Rub together on a plate or stone, a little fresh-slaked lime, with four times the same quantity of guano; put it into a wide-mouthed bottle; you will then have evidence from the smell, not only of the abundant quantity of ammonia which it possesses, but also of the impropriety of mixing lime with it, for use; seeing that the ammonia is liberated, and would be lost in the atmosphere.

As guano loses ammonia by exposure, the writer says it should be kept in close boxes or casks, and that it should not be sown in an unmixed state, in immediate contact with the seed.

Wheat Culture.

The following article, is from the pen of Dr. Daniel Lee, a member of the New York Legislature, as also chairman of the Committee on Agriculture. Its facts and objects will commend it to all intelligent readers.

The *Albany Argus*, after calling attention to the subjoined article, advocates the establishment of an Agricultural *school* or *college* in the following terms:

The tendency of such an institution would be to elevate farming among the "liberal" professions, while through the agency of the young farmers who study and practice here and go into the country again, it would diffuse a stratum of useful knowledge among the tillers of the soil, which would enable them to raise two bushels of wheat or two spears of grass where one grow now.

It is reasonably supposed that a college of this character would be mainly endowed by private liberality. The sum required is not large, only $30,000, which would be sufficient to purchase the farm of 200 acres required, stock it completely, erect the necessary buildings and buy all needful apparatus.

When we call to mind that there is not a college in this state which has expended less than $100,000 for their literary purposes, this sum of $30,000, when contrasted with the magnitude of the interests involved and to be benefitted must seem a mere trifle.—To make able lawyears, physicians and divines, the People of this state have expended not less than $1,000,000 upon our colleges and higher seminaries of learning, while to make able and useful farmers we believe not one dollar has been expended. We scarcely know how to consider this marked neglect. There has undoubtedly been a time when study was not considered at all necessary to a farmer, but these days have passed. That "knowledge is power," begins to be fully appreciated in every pursuit.—That to be a successful and profitable farmer requires SYSTEMATISED observation, is now generally admitted.

Under the systematized agriculture of the English farmers, 82 bushels of wheat have been grown upon one acre of land. In this state, with a soil far more fertile, 40 bushels is considered an extraordinary yield, and the average is not over 20 bushels. Here certainly is a wide margin for improvement, and in a crop too which ever must be one of the greatest staples of the Middle and Western States. We may close with remarking, that to obtain any given result, it is frequently not so much *the amount* of labor or money that is applied, but *the manner* in which it is directed. Do we not see in every day of life that the operations of the clear head and practical observations of one person, will frequently make five dollars tell more effectively than ten dollars under the desultory application of a thoughtless or a cloudy head?

This is the very principle in agricultural improvement. It is, so to direct the vast amount of labor employed by the 4,000,000 of farmers of the United States as to *economise* in is application, and if possible make one day's labor subserve the purposes of two, under the present careless and desultory methods of farming.

Wheat Culture in New-York.

The culture of wheat in this state, is an important branch of its rural industry. It is a lamentable fact that a large portion of the elements in wheat lands, indispensible to the successful nourishment and maturity of this bread-bearing plant, have been taken from the soil in the millions of tons sent to market within the last fifty years.

The owners and cultivators of these lands, know not what it is they have lost; nor from what source the precise constituent parts of wheat can be obtained. This article, so superior for the manufacture of good bread, contains elements peculiar to itself, and hence manures formed by the decomposition of any other plant, cannot restore to an exhausted wheat field, all the ingredients contained in a kernel of wheat.

Our agriculturists are consuming the *raw material* of this invaluable grain, at the rate of about eleven or twelve millions of bushels a year; probably not one-tenth of each of the elements of which, or at least a portion of them, is annually restored to the soil from whence all this grain is taken. Now, as Heaven will not create anew one particle of matter, whether the two and a half millions of people in this state have an abundance of good cheap bread, or starve, it may not be amiss for sensible men to enquire, in what way can every farmer in New York supply his fields with the raw material of this important crop, and so combine them, as to be able to manufacture a bushel of good wheat for exportation at 60 cents, and not exhaust his soil?

An elaborate discussion of all the elements that enter into the composition of the wheat plant, and of the various resources presented to the tiller of the earth, for the cheap collection of those elements, would be out of place in the columns of a daily newspaper. Suffice it to say that, over 97 per cent of such elements exist in the atmosphere, in exhaustless quantities.

Having made this important discovery, the French chemists were not long in finding cheap agents to be applied to the soil, which by their powerful affinity for the gaseous elements of wheat, have made nearly one-half of France into one vast field of "waving corn."

The writer of this has devoted much attention to the subject of diffusing the knowledge that already exists in relation to this truly practical science among the farmers of this state; and especially of imparting this knowledge to their sons.

The plan adopted in France, was this: The Government chartered a company of business men and leased them some old rural palaces at Brignon, near Paris, for college buildings, and also a tract of Crown lands 1485 acres, for the education of six or seven hundred pupils. The company placed the whole establishment under the charge of M. Bella, in 1829. After it had been in operation ten years, M. Bella reported that the Institute had paid its way, divided 4 per cent. annual interest on the stock, and added 145,852 francs to the productive value of the real estate. The Government pays the professors on condition that a certain number of pupils shall be received from each rural district in the kingdom. 'After a thorough course of instruction, embracing alike the *science*, *practice* and *profits* of good husbandry, and extending through a period of three years, these young gentlemen graduate, go home and teach by public lectures and other means, those that cultivate the earth how to make two bushels of wheat to grow on the same land that before produced but one.—With a population of 30,000,000, and on a territory of only about twice as large as New York, men of science have taught the French people how to harvest annually *eighteen times* as much wheat as is grown in our own Empire State!

In Germany, the science of agriculture is taught in nearly all their common schools. According to the census returns of 1840, the hay crop, grown in this state in 1839, was worth about $30,000,000.—As there are about two acres in pasture to one in meadow, the whole annual crop of New-York cannot be worth less than $60,000,000 taking the census statement for our estimate. It would not be difficult to demonstrate that taking a fair average of all the grass lands in this state, each acre might produce one-third more than it now does, and at a *less* cost of labor, if it was wisely and properly expended.

Why not open a school, then, somewhere near the capital of this great state, and employ a few competent men to teach the science, the practice and the profits of every branch of rural industry carried on in New York? Why continue to lose ten or twenty millions of dollars worth of agricultural products every year—wear out our soil, and drive thousands of our young men and enterprising farmers away from their native state, to grow wheat in Illinois, and by a severe competition, destroy the value of farming operations to all that stay behind? If a practical knowledge of the science of agriculture be so valuable to the people of France and Germany, where labor is comparatively cheap, can such knowledge be worthless here, where the expense of labor is the great drawback upon the profits of the husband-man? If the legislature will do a little to aid in establishing a State Agricultural Institute, patriotic and liberal individuals will do the balance. The whole community will share alike in the advantages arising from a large increase of the best comforts of life.

L.

How to make an Unproductive Tree Bear.—A lady of our acquaintance, took us into her garden a few days ago, where we were shown an apple tree which she informed us had been planted for ten or more years, but had never until last year borne any fruit. In looking over an old volume, she accidentally met with what purported to be a remedy for this unproductiveness, which was simply to cut from each limb, close to where it diverges from the trunk, a piece of bark about four inches round the limb one inch in width, and immediately replace it by tying on with a rag until it adhered again. Early last spring she tried this experiment upon the tree we speak of, leaving, however, two or three limbs untouched. The result was, that in autumn it was filled with apples; but it has been worthy of remark that those limbs only which had as it cut, bore fruit. The operation is very simple, and has proved successful in this instance, we have no hesitation in recommending its trial in similar cases.—*Reading Gazette.*

PRIZE BULLS AND CALVES.

The subscriber offers for sale two full blood Devon Bulls, which obtained the two first prizes offered for Devon By the Baltimore County Agricultural Fair, 19th Oct. last,
Richard, 2 years old last spring, $50
Marmion, 1 ear old last June, 50

ALSO, ated bull Waverly. They are large and perfectly beautiful
3 full blood Devon Bull Calves, got by the ey are 4, 6 and 8 months old at this time. Price $40 each STANLEY,
JOHN st. Baltimore.
de27 50 S.

SUPERIOR RASPBERRIES & OTHER FINE FRUIT.

The subscriber is prepared to furnish his celebrated HUISLER RASPBERRY plants at a reduced price—say at $6 per 100 plants—they are warranted genuine, and unsurpassed by any other variety known in this country.

He has also a variety of GRAPE VINES of the finest kinds, raised from cuttings.

Likewise a good supply of the large Dutch red CURRANT, and a small but very superior assortment of English GOOSEBERRIES—and a general variety of ROSES, FLOWERING SHRUBS, &c.

JOS. HEUISLER,
Ross street, near the Public School.

☞Orders can be left with Mr. S. SANDS, at the office of the American Farmer. feb 21

POUDRETTE

Of the very best quality for sale. Three barrels for $5, or ten barrels for $15—delivered free of cartage by the New York Poudrette Company, 23 Chambers street, New York. Orders by mail, with the cash, will be promptly attended to, and with the same care as though the purchaser was present, if addressed as above to

D. K. MINOR, Agent.

The price will be increased next spring. Jan. 3.

GREEN GAGE PLUM.

The subscriber has in his assortment of superior Fruits, a very fine tree of above description, originated by himself from the seed, pronounced by a competent judge superior to any thing he has seen in England. He can furnish them at $1 per tree, of good size, smaller ones, 50 cents. Also, a few of the PEACH APRICOT, the best of the apricot family, price 50 cents per tree—and his famous GENESEE RASPBERRY, at $10 per 100 plants.

oc 18 3t JOSEPH HUISLER.

GODEY'S LADY'S BOOK FOR 1844,

Edited by Mrs. Hale and others, the best Magazine of the season, ☞and the greatest circulation of any in the world.☜ It contains Line and Mezzotint Engravings, Colored Fashion Plates, Music, and Contributions by the best authors in the United States.

The price for one year's subscription is	$3	Five copies,	$10
		Eight "	15
Two copies,	5	Eleven "	20

no 11 Address L. A. GODEY, Publishers' Hall, Philadelphia.

GROUND PLASTER.

The subscriber is now engaged in the grinding of Plaster of Paris, for agricultural purposes, and would respectfully inform Farmers and dealers that he is prepared to furnish it of the best quality at the lowest market price, deliverable in any part of the city, or on board Vessels free of expense, application to be made at the Union Plaster Mill, near the Glass House, or at the office No. 6 Bowly's Wharf, corner Wood street.

P. S. CHAPPELL, or,
WM. L. HOPKINS, Agent.
Jan. 3.

LIME—LIME.

The subscriber is now prepared to furnish from his depot at the City Block, Baltimore, ALUM STONE LIME of the purest description, deliverable at any point on the Chesapeake bay or its tributaries, at such prices as cannot fail to please.

He is also prepared to furnish superior building Lime at 25 cents per bushel, in hhds. or at $1 per bbl.

E. J COOPER,
aug 30 City Block, Baltimore.

SUPERIOR DURHAM STOCK.

The subscriber is authorised to sell the following thorough bred and very superior animals, the pick of the celebrated herd of S. Canby, esq. of Wilmington, Del. viz.

BEAUTY, MABEL and LOUISA, cows, the latter will calve in about a month—the two last could not have been purchased at the price now asked for them when 1 month old, and they are considered by Mr. Canby the best he ever bred. Price $100 each.

Likewise, two young BULLS, PRINCE and OSCAR, from 1 to 2 years old, also 100 dolls. each; and 3 or 4 younger animals, low in proportion. Mr. Canby paid 200 dollars for Beauty when a heifer. Mr. Canby's present arrangements being such as to make it requisite for him to part with his blooded stock, the above, which are the choicest thereof, are put at nearly half the price they have been hitherto held at, and presents an opportunity seldom obtained to secure thorough pedigreed and very superior stock, at comparatively very low prices. Further particulars can be obtained by addressing (post paid) Mr. S. Canby, Wilmington, Del. or the subscriber.

S. SANDS.

AYRSHIRE BULL.

For sale, a young Bull, out of imported stock, one year old this spring. Price $70.

Any one having heifers of this breed to dispose of, might obtain a purchaser on application to S. SANDS, Farmer office.

Ja 17

FOR SALE—A BULL,

4 years old, of the Jutland breed, imported by F. Konig, esq.—he is a very fine animal, docile, and easy of keep. Enquire at my store No. 14 German st. Baltimore.

E. H. MERRILL.
fe 14 3t

GARDENER AND DAIRY WOMAN WANTED.

A gentleman of Talbot co. Md. wishes to employ a man who is well acquainted with vegetable gardening, and the management of fruit trees—and his wife to assist in milking and attending to the dairy. Apply at this office.

HORSE POWERS AND CORN CRUSHERS.

The subscriber has for sale the above Implements which he can recommend to all purchasers as being SUPERIOR ARTICLES. They are made with a view to strength, durability and efficiency, possess great power, are constructed upon the very simplest principles of mathematical exactitude, and are calculated to do as much work as the largest farmer can desire, and being free from complication, are not easily put out of order, and easy of repair. For proof of their intrinsic value, the subscriber refers to the following certificate from one of our most intelligent practical farmers, who combines with a knowledge of farming that of machinery, and is every way competent to pass a correct judgment.

GEORGE PAGE, Machinist,
West Baltimore st. Baltimore.

Orders and letters of inquiry, POST PAID, will be promptly attended to. feb 14

I hereby certify that I was one of the committee on Agricultural Implements and Machinery at the last fair of the Baltimore Co. Agricultural Society—that I attended the first day of examination but not the last: that after a full and fair examination of all the other machines of similar kinds, and an interchange of opinions among the judges, it was determined by a vote of 4 out of the 5 judges, to give Mr. GEORGE PAGE the first premium on his CORN and COB CRUSHER and HORSE POWER, they each being considered very superior, both in power and operation, as well as durability to any others on the ground. It was universally admitted, that the Corn and Cob Crusher could do twice as much work as any other machine of the kind on the ground—and I must confess, that I was both mortified and surprised, to find by the award of my co-judges, that they had changed their opinions after I left, and it had been agreed upon to award the above premiums to Mr. Page by so decided a vote as 4 to 1, that they should afterwards change that determination after I had left without consulting me is alike a matter of surprise and mortification.

ABNER LINTHICUM, Jr.

AULT'S ENGLISH GARDEN SEEDS, &c.

Just received, our usual supply of first rate ENGLISH GARDEN SEEDS, consisting of the various kinds of Peas, Beans, Cabbage, Radish, Onion, Cucumber, Broccoli, cauliflower, Beet, Mangle Wertzel, Ruta Baga, &c. It is a fact known to every gardener of experience, that first rate English Garden Seeds produce incomparably better crops than can be raised from seeds saved in this climate. This is particularly the case with Peas, Cabbage, Cauliflower, Lettuce, &c.

As we receive most of these seeds direct from the growers, who are persons of the first respectability and experience, there is no doubt of their proving as represented. For sale, wholesale and retail. by

SAM'L AULT & SON,
Feb. 28. Corner Calvert and Water sts.

ROBT. SINCLAIR JR. & CO. No. 60 Light street, offer for sale the following Machinery, &c. all of their own manufacture, and warranted to be made inferior to none in this country, viz:

HAND CORN SHELLERS, 3 sorts, at 15a$17 each.
Horse power do. 2 do 35a$45 "
Cylindrical Straw Cutters, improved construction, at 28 to $75.
Vegetable Cutters, $20 each.
HORSE POWERS, 75 to $100 each.
Threshing Machines, 40 to $60 each.
CORN AND COB CRUSHERS, warranted to grind 25a30 bushels per hour, $65.
Common Straw Cutters, 5a$12 each.—Also
☞ SELF-SHARPENING AND COMMON PLOWS—a large and general assortment, 2a$15 each—among which are the Hill Side or Level land and Subsoil Plows, which received the highest premium at the late Fairs.
☞ PLOW AND MACHINE CASTINGS, by wholesale and retail.
☞ Garden and Farming TOOLS.

We will also supply orders for Endless Chain Horse Powers, on the plan just introduced in this city from Ohio. The plan and simplicity of these powers justify us in saying that they are a decided improvement on powers of this description.

FARM FOR SALE.

The subscriber is authorised by a gentleman, who, being engaged in other business, is not able to devote his whole time to farming, to sell the FARM on which he now resides, situated about 8 miles from Baltimore, near one of the best turnpike roads in the county, and having the advantage of a large stream of water passing through it, with a fine mill seat with a race ready dug and dam built. This farm contains 180 acres, more or less, having full proportion of wood, and about 70 acres well set in timothy. There is a large apple orchard in good condition, a young and thrifty peach orchard of select trees, which seldom fail to bear abundantly. The buildings are substantial and convenient, being a large brick Dwelling, rough cast, with portico back and front; a large stone Switzer barn, with extensive stabling below; milk house, smoke house, a wagon shed 120 feet front, corn house and granary, carriage house, with blacksmith shop. The farm is well enclosed and divided with good fences, a large portion of which are of stone.

The present proprietor has spared no expense within the last 3 or 4 years, in improving the soil by the most approved system of cultivation; 6000 bushels of lime have been judiciously distributed, within the last two years, the beneficial effects of which may be seen by the growing crops. It is estimated that from 100 to 125 tons of hay will be cut the coming season, and a much larger quantity the succeeding summer. The wheat and rye now growing has every appearance of making as fine a crop as any in the county.

The subscriber invites those inclined to secure a productive farm, situated in one of the richest districts of Baltimore county, remarkable for its healthiness, within an hour and a half's drive of the best market in the state, to visit this property and judge for themselves. To save unnecessary application, the terms are $16,000, one-half cash, the balance on a long credit. Apply to

SAMUEL SANDS,
Jan 10 at the office of the American Farmer.

A SITUATION IS WANTED AS MANAGER

Of a Farm, by a single man, who can produce the best recommendations for his character and skill in all the operations of farming—he would be willing to go to any quarter of the country. A line addressed to X. Q. care of the editor of the American Farmer, Baltimore, will be attended to. de 6 3t

TO FARMERS.

The subscriber has for sale at his Plaster and Bone Mill on Hughes street, south side of the Basin, GROUND PLASTER, GROUND BONES, OYSTER SHELL & STONE LIME, and LEACHED ASHES, all of the best quality for agricultural purposes, and at prices to suit the times.

fe 23 WM. TREGO, Baltimore.

BALTIMORE MARKET, March 12

Beef, Balt. mess,	8½a9	Butter, Glades, No. 1,	13a		
Do. do. No. 1,	6½a7½	Do. do.	2, 7a11		
Do. prime,	5a5.50	Do. do.	3, 5a7		
Pork, mess	10	Do. Western	2, 6a		
Do. No. 1	9½a9¾	Do. do.	3, 5a6		
Do. prime	8 a8½	Lard, Balt. kegs,	1, 6½a7		
Do. cargo,	a	Do. do.	2, none		
Bacon, hams, Ba. lb	6½a7	Do. Western,	1, 6½a7		
Do. middlings, "	5a5½	Do. do.	2, 5a5½		
Do. shoulders, "	4½a	Do. do. bls	1, 6a6½		
Do. asst'd, West.	5a	Cheese, casks,	6		
Do. hams,	6a	Do. boxes,	5a8½		
Do. middlings,	5a	Do. extra,	12a15		
Do. shoulders,	4a				
COTTON—					
Virginia,	9a10	Tennessee, lb.	0		
Upland,	10½a11½	Alabama,	11a12		
Louisiana,	11½	Florida,	10a12		
North Carolina,	10a11	Mississippi			
LUMBER—					
Georgia Flooring	12a15	Joists & Sc'ling, W.P.	7a10		
S. Carolina do	10a12	Joists & Sc'ling, Y.P.	7a10		
White Pine, pann'l	25a27	Shingles, W. P.	2a9		
Common,	20a22	Shingles, ced'r,	3.00a9.00		
Select Cullings,	14a16	Laths, sawed,	1.25a 1.75		
Common do	8a10	Laths, split,	50a 1.00		
MOLASSES—					
Havana, 1st qu. gl	30a31	New Orleans	24a25		
Porto Rico,	26	Guadaloupe & Mart	26a28		
English Island,		Sugar House,	28a36		
SOAP—					
Baltimore white,	12a14	North'rn, br'n & yel.	3½a4½		
brown & yll'w	4½a5½				
TOBACCO—					
Common	2 a 3½	Yellow,	8 a10		
Brown and red,	4 a 5	Fine yellow,	12a14		
Ground leaf,	6 a 7	Virginia,	4 a 9		
Fine red	6½a 8	Rappahannock,			
Wrappery, suitable		Kentucky,	3 a		
for segars,	8a13	St. Domingo,	13 a11		
Yellow and red,	7a10	Cuba,	15 a38		
PLASTER PARIS—					
Cargo, pr ton cash	3.12a	Ground per bbl.	1.12a		
SUGARS—					
Hav. wh. 100lbs	9a10.50	St. Croix, 100lbs	7.00a8.00		
Do. brown	a7.50	Brazil, white,	a		
Porto Rico,	6 a7	Do. brown,			
New Orleans,	6¾a7.20	Lump, lb. c.			
FLOUR—We quote					
Superfine How. st., from stores, bl.			$4.50a		
Do. City Mills,			4.62		
Do. Susquehanna,			4 62		
Rye, first			3.25a		
Corn Meal, kiln dried, per bbl.			2.50		
Do. per hhd.			11.25		
GRAIN—					
Wheat, white, p bu	1.12	Peas, black eye,	50a		
" best Pa. red	95a100	Clover seed, store	5½a		
" ord. to pri. Md	85a98	Timothy do	2.a2.25		
Corn, white,	39a	Flaxseed, rough st.	1.30		
" yellow Md.	42a	Chop'd Rye, 100 lbs.	1.25		
Rye, Md.	54a	Ship Stuff, bus.	20a		
Oats, Md.	25a26	Brown Stuff,	15a		
Beans,	100	Shorts, bushel,	10a		
FEATHERS—perlb.			28a33		
COFFEE—					
Havana,	7 a 8	Java, lb.	10 a12		
P. Rico & Laguay.	6½a 8	Rio,	6½a8		
St. Domingo,	5½a 6½	Triage,	3½a 4½		
RAISINS—Malaga bunch,		box,	.80a1.90		
CANDLES—					
Mould, common,	9a10	Sperm,	32a33		
Do. choice brands,	10½	Wax,	60a65		
Dipped,	8a 9				
WOOL—					
WASHED.		UNWASHED.			
Saxony,		Saxony and Merino			
Full Merino,		Common, to ½ blood,			
3-4 blood do.		Pulled,			
1-2 do do					
1-4 and common,					
Tub washed,					

Tobacco—The stock is very light, and the sales are larger than the receipts, purchasers have but a slim assortme't therefore to choose from of Ohio & Maryland. We note sm'l sales of old crop of Md. common quality, at 2.75, and gro'nd leaf 3a5; small sales of new crop common at $3a4. We continue former quotati's, viz. infer. and com. 2a2.50; middl. to good 4a6, good 6.50a8, and fine 8a12. The rate for Ohio is as follows: com. to mid. 3a4.50; good 5a6; fine red and wrappery 11a13—The inspec'ns of the week comprise 71 h. Maryland, 52 Ohio, 2 Penn. 3 Va.—Total 128 hhds.

Wool—The demand continues good and but a small stock in market to operate upon. We note a sale of a lot of mixed of 5000 lbs. com to fine at 25a35c. and also a sale of a parcel of 3000 lbs washed & unwashed native at 22½a28c per lb.

Lumber.—A better feeling in the market and prices improving.

Cattle—Offerings Beef Cattle at the scales embraced only 130 head Monday of which 80 were sold and the balance is laid over; prices ranged at 1.75 to $2.50 per 100 lbs. on the hoof, eq'l to $3.50a4.75 net.

Flour—Howard st. has declined, and we note sales of 7 or 800 bbls good mixe brands, from stores on Saturday and Monday at 4.50—some holders, however, are unwilling to sell at this rate; there is no fixed receipt price.

Some holders City Mills Flour are willing to sell at 4.62.

Grain—We continue to quote good to best red wheats at 95a100 cts.; very prime 101.

THE BOMMER MANURE METHOD.

We wish to afford every facility to the introduction of this method, as the better it is known the higher it will be esteemed. If farmers who are living in a neighborhood will club together, we will offer them the following inducements to purchase, viz. To any club of Five ordering the method to one address, we will make a deduction of 15 per cent. To a Club of Ten, 20 per cent. reduction, and to larger clubs, a still larger discount upon our established rates for single methods, which are as follows :

For a garden up to 20 acres,	$6
" 100 acres arable land,	10
" 200 " "	15
" 300 " "	18
" 400 " "	20
Unlimited number of acres,	25

☞Purchasers of a smaller right can at any time increase it by paying the difference in price. ABBETT & CO.

Southern proprietors of the Patent Right,
at Parsons & Preston's Book Store, adjoining the Rail Road Depot
mh 13 tf in Pratt street, Baltimore.

☞Those who find it more convenient, can leave their orders with S. SANDS, at the office of the *American Farmer*, who will promptly attend thereto. mh 13

PEACH AND PEAR TREES.

CATALOGUE OF VERY CHOICE SORTS OF *FRUIT TREES*,

For sale, raised on the farm of a gentleman near this city, who has selected them with much care from a great many varieties.

PEACHES.

Free Stones. No.		Ripe.	Cling Stones or Pavies. No.		Ripe.
3	Soft Heath,	Sep.20to25	1	Bourdine,	Oct. 1to10
20	BaltimoreBeauty,	Aug.5to10	6	EarlyNewington,	Aug 20to25
22	Belle de Vitry,	Sep.15to18	13	FrenchMercaton.	Aug.25a28
24	Red Magdalen,	Aug. 18to20	17	Kennedy'sCarolina,	Sa18to23
28	Columbia,	Sep.20to24	21	Washington,	Sep.20to25
29	Oldmixon,	Aug.25to30	26	Red Preserving,	Sep.20
34	Veto,	Sep.26to28	27	Heath,	Sep.20to25
38	Troth's Early Red,	Sep.5to10	42	Algiers,	Oct.10to15
41	Belgarde,	Sep.8to12	43	Large Morissania,	Sep.23to28
54	Monstrous Free,	Sep 15	72	Old Newington,	Sep.10to15
58	Lady Washington,	Aug.22to25	84	Orange Cling,	Sep.15to20
59	Yellow Alberge.	Sep.20	87	Parie Admirable,	Sep.25to30
60	Nectarine Peach,	S'p.25to28	92	Red Rover,	Sep.1to5
62	Red chk. Malagatune,	" 12to18			
66	Yellow Rose,	Sep 24to28			
70	Canary,	Aug.15to20			
73	Snow Ball, or White Magdalen,	Aug.25to30			
86	OrangeFreeStone,	S'p.18to25			

ALSO,
APPLE, CHERRY, PEAR, PLUM & APRICOT TREES,
comprising all the best varieties known in this country or Europe.

Peach Trees 15 cts. each.
Pear grafted on quince stocks, 37½ cts. in free stocks 50 cts.
Plum and Apricot Trees 50 cts. each Apple Trees 25 cts. each.
Cherry 50 cts. mh 13

R. SINCLAIR, Jr. & CO.
Agricultural Implement Manufacturers, Nursery & Seedsmen, No. 60 Light street,

Offer for sale a large and superior assortment of GARDEN SEEDS, received by the recent arrivals from Europe, and from their Seed Gardens near this city. Also in store,

FIELD SEEDS, viz. red and white Clover, Trefoil, Lucerne, Ray Grass, Vetches, Herds Grass, Ky. Blue Grass, Orchard Grass, Meadow Oat Grass, Sugar Beet, Mangel Wurtzel, Cow Peas, Beans, Corn, Early Potatoes, &c.

PLOUGHS—The most prominent of which are the DOLPHIN SELF-SHARPENING & WHEEL, of late invention; Winans', Beache's, Pierce's, and Prouty & Co's self-sharpening—Sub-soil, three-furrow, Davis' and Davis' improved—Wiley's and many other valuable sorts. Also,

HARROWS and CULTIVATORS—Of many forms and patterns for cultivating Corn, Tobacco, Cotton, &c. Their stock of AGRICULTURAL MACHINERY is large and consists principally of the following, viz. Corn Mills, Corn and Cob Crushers and Shellers for manual and horse powers, Threshing Machines, Vegetable Cutters, Churns, Horse Rakes, Lime Spreaders, Sugar Mills, Rollers and Horse Scoops.

GARDEN, FARMING & HARVEST TOOLS—The assortment of these is general, and embraces all the most valuable, new and useful kinds.

BOOKS—Treating on Agriculture, Gardening, management of Stock, Poultry, Bees, &c.

FRUIT & ORNAMENTAL TRESS & PLANTS—supplied from Sinclair & Corse's Nurseries near this city, whose stock of trees and their constant personal attention to this department warrants to purchasers, articles of prime quality and 'true to marks'

☞Priced Catalogues furnished gratis, containing description of implements, directions for planting trees, management of seeds, &c.
ma 6 ROBT. SINCLAIR, Jr. & CO.

VERY SUPERIOR GARDEN SEEDS, (IMPORTED.)

The subscriber offers for sale a very superior lot of GARDEN SEEDS, imported direct from England from the best gardeners there, and warranted genuine. They comprise many varieties of Cabbage, Beet, Beans, Peas, Radish, Mangle Wurtzel, Ruta Baga, Cauliflower, Cucumber, and a variety of other kinds. Catalogues at my office.
fe 28 S. SANDT, American Farmer.

WHITE TURKIES.

A few pairs of those beautiful White Turkeys, so much admired for lawns on gentlemen's estates, for sale at this offied. f 21

MARTINEAU'S IRON HORSE-POWER IMPROVED

Made less liable to get out of order, and cheaper to repair, and at less cost than any other machine.

The above cut represents this horse-power, for which the subscriber is proprietor of the patent-right for Maryland, Delaware and the Eastern Shore of Virginia; and he would most respectfully urge upon those wishing to obtain a horse power, to examine this before purchasing elsewhere; for beauty, compactness and durability it has never been surpassed.

Threshing Machines, Wheat Fans, Cultivators, Harrows and the common hand Corn Sheller constantly on hand, and for sale at the lowest prices.

Agricultural Implements of any peculiar model made to order at the shorest notice.

Castings for all kinds of ploughs, constantly on hand by the pound or ton. A liberal discount will be made to country merchants who purchase to sell again.

Mr. Hussey manufactures his reaping machines at this establishment. R. B. CHENOWETH,
corner of Front & Ploughman sts. near Baltimore st. Bridge, or No.
20 Pratt street. Baltimore, mar 31, 1841

PORTABLE TUBULAR STEAM GENERATOR.

The undersigned *successors to the late firm of Bentley, Randall & Co.* are manufacturing, and have constantly on hand a full assortment of the above Boilers, which within the last few months have undergone many improvements: we can now with confidence recommend them for simplicity, strength, durability, economy in fuel, time, labor and room, to surpass any other Steam Generator now in use. They are equally well adapted to the Agriculturist for cooking food for cattle and hogs, the Dyer, Hatter and Tanner for heating liquors, to Manufacturers (both Cotton and Woollen) for heating their mills, boiling sizing, heating cylinders, &c., to Pork Butchers for heating water for scalding hogs and for *rendering lard*, to Tallow Chandlers for melting tallow by circulation of hot water (in a jacket,) to Public Houses and Institutions for cooking, washing and *soap making*, and for many other purposes for all of which they are now in *successful* operation; the economy in fuel is almost incredible; we guarantee under all circumstances a saving of *two thirds*, and in many instances *fully three fourths*—numerous certificates from the very best of authority can be produced to substantiate the fact. We had the pleasure of receiving the premium for the best Steam Apparatus at the Agricultural Fair held at Govanstown in October 1843.

Manufactory, McCausland's old Brewery, Holliday st. near Pleasant st., Baltimore, Md.
Dec. 6. tf RANDALL & CO.

FARMERS! EXAMINE FOR YOURSELVES!

The well selected stock of Implements belonging to JAMES HUEY & CO. No. 7 Bowly's wharf, Baltimore. Our stock consists of a large lot of PLOUGHS, SHEARS, POINTS, and CULTIVATORS, which we will sell low to suit the times—among which rank the economical WILEY, and the MINOR & HORTON PLOUGH of the N York composition metal and manufacture—the share has a double point and edge, equal to two shares and points. We keep on hand all kinds of PLOUGHS, premium CORN SHELLERS, HAY & STRAW CUTTERS, Corn & Cob CRUSHERS, Horse RAKES, Corn and Tobacco HOES. ☞Farmers and Planters on the Eastern and Western Shores may send their orders with confidence, as they will be attended to with promptitude. We also keep GARDEN & FIELD SEEDS. Thankful for past favors, we hope to merit a continuance of the same. Agents for the above implements,
S. L. STEER, Market st. near the corner of Paca, Baltimore.
E & W. BISHOP, Bel-air market, Baltimore fe 28

PLOUGHS & PLOUGH CASTINGS,

AT WHOLESALE AND RETAIL.

300 ready made PLOUGHS, and 45 tons PLOUGH CASTINGS, on hand, which have been made with great care and of the best materials.

The variety are Gideon Davis' improved Ploughs of all sizes, with both cast and wrought shares, and with intermediate sizes for cast shares onl

King's Connecticut improved by myself with wrought and cast shares; they throw a wider furrow than the Davis ploughs.

My own patent self sharpening Cleazy Plough; these I recommend as a superior plough in every respect, and easily kept in order.

Bar share and Coulter Plough, also hill-side and double mould Ploughs, together with a general assortment of Agricultural Implements, Straw Cutters, Corn Shellers, Wheat Fans, Horse Powers, Threshing Machines, &c. &c. which he will recommend to be as good as can be obtained at any other establishment in this country, and which he is selling at very reduced prices.

Also in Store, Landreth's SUPERIOR GARDEN SEEDS, a fresh supply just received.

JONATHAN S. EASTMAN,
Pratt street, between Charles and Hanover sts.
fe 28 tf

BALTIMORE CO. AGRICULTURAL SOCIETY.

At the annual meeting of the Society held at Govanstown, on the 20th day of October, 1843, the following resolution was adopted :

"*Resolved*, That such counties of Maryland as may form societies auxiliary to this, shall on the payment of fifty dollars to the Treasurer of this society, be admitted on equal terms as regards competition for premiums, if in the opinion of the Executive Committee, such an arrangement shall appear to be expedient."

The Executive Committee at a meeting held in Baltimore, Dec. 23d, 1843, having fully concurred in the above resolution, do cordially invite the farmers of the counties of the state to form auxiliary societies, and become competitors for premiums offered by this society.

JOHN B. H. FULTON, Rec. Sec.
jan 10

JAMES MURRAY'S

PREMIUM CORN AND COB CRUSHERS.

These already celebrated machines have obtained the premium by a fair trial against the other Crushers exhibited at the Fair held at Govanstown, Balt. co. Md. Oct. 18th, 19th and 20th, 1843, and the increased demand enables the patentee to give further inducements to purchasers by fitting an extra pair of grinders to each machine without extra charge. Prices $25, 30, 35, 40, 45.

ALSO, small MILLS, which received a certificate of merit, for $15.

I have also superior CUTTING BOXES, such as will bear inspection by either farmers or mechanics.

Also, Horse Powers, Mills. Corn Shellers, Mill and Carry-log Screws, small Steam Engines, Turning Lathes, &c. &c.

Any kind of Machine, Model or Mill-work built to order, and all mills planned and erected by the subscriber, warranted to operate well.

☞Orders can be left with J. F Callan, Washington, D. C.; S. Sands, Farmer office; or the subscriber,
no 8 JAS. MURRAY, Millwright, Baltimore.

Baltimore, March 4th, 1844.

To the Editor of the American Farmer :—

Dear Sir,—A friend has handed me one of your papers of February 28th, in which I see a certificate of Mr. Abner Linthicum, Jr., stating that it was determined by a vote of 4 out of 5 judges, to give Mr. George Page the first premium for his Corn & Cob Crusher & Horse Power but the whole merit he places to account of the crusher. Now by refering to the report of the Committee of the Baltimore Co. Agricultural Society, I find that Mr. Page's Crusher ground 12 ears of corn in 40 seconds—Mr. Linthicum also states that it was universally admitted that the Corn and Cob Crusher could do twice as much as any other on the ground, but does not state what power is required to grind at that rate. I take the report of the committee for the quantity ground : 12 ears in 40 seconds; now divide 1 bushel or 108 ears, which is the same by 12, we have 9—9 times 40 seconds, or just 6 minutes to a bushel of ears of corn; this I cannot admit to be double what my crusher will grind, nor is it as much as mine will grind of the same quality—at $40 or $45.—Mr. Linthicum, Jr. and all Machinests are invited to a fair trial of grinding, and if I do not do more work, taking the power, quantity and quality into consideration, I will give them my machine gratis.

N. B. The public are cautioned a second time against making or vending Corn Crushers having a tube, or tubes for holding the ear of corn, as the same is patented. Patent rights for sale by the subscriber.

JAMES MURRAY,
Millwright & Machinist.

GREAT IMPROVEMENT IN HUSSEY'S CORN AND COB CRUSHER.

It is believed that the Corn and Cob Crusher invented and manufactured by the subscriber in Baltimore, is taking the lead of all others. Whatever its merits may be, the machine is now pretty well known, and will still be made in its usual form, and kept for sale as heretofore.

The chief design of this advertisement is to introduce to the notice of farmers, a cheaper and in some respects a better article, which has just been completed and proved. It requires much less power, and crushes and grinds much faster than the other.

The price including extra grinders, is	$25
A machine working two sets of grinders,	35
One with three sets for water power,	45

Including extra grinders for each set, all made in a substantial manner, and warranted as advertised. As a recommendation to the late improvement a distinguished stock breeder of this vicinity assures me that it grinds faster, and with less power than my original machine, while the original is highly recommended by C. N. Bement, esq. of Three Hills Farm, near Albany, N. Y.

Orders for HEMP CUTTERS and REAPING MACHINES, should be sent to the subscriber as soon as possible, so that none who design having such machines may be disappointed at harvest time. OBED HUSSEY.
fe 21 tf

MURRAY'S CORN & COB CRUSHERS & GRINDERS.

The subscriber having so simplified the construction of the Machine, and having at the same time added to its efficiency, both for the quantity and quality of its work, is now enabled to sell for $25 Crushers of the capacity of cylinder heretofore sold at 40 dollars—Hand Crushers for 20 dollars—either with or without self-feeders. Any other machines made to order. Also, Repairs of all kinds of agricultural implements. These machines can be seen in operation opposite the Willow Grove Farm of Mr. J. Donnell.
fe 14 WM. MURRAY.